UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

DATE: August 26, 2005

SUBJECT: Remedial Investigation Report, Screening Level Ecological Risk Assessment, Chemical Recovery Systems, Elyria, Ohio.

FROM: David Brauner, Ecologist

TO: Gwen Massenburg, PRM

I have reviewed the aforementioned Screening Ecological Risk Assessment (SERA).

In general, Parsons has responded adequately to the comments submitted by U.S. EPA. There do not seem to be any fatal flaws in this portion of the Remedial Investigation (RI). There are a few issues, however, that should be addressed, before the SERA can be approved.

1) Section 1.2, pg 4-5 Conceptual Site Model (CSM)
In general, the CSM description should be more detailed, including specific exposure pathways. For example, the CSM description does not describe specific pathways for exposure to aquatic receptors; it also does not mention any ingestion pathways for either terrestrial or aquatic receptors. This lack of detail would have been helped by the inclusion of a diagram or chart summarizing the CSM, including which exposure pathways are complete and which are not, in addition to more details in the text itself.

Secondly, the first full paragraph on page 5 (starting "For the CRS site,...), needs clarification. It states that dermal exposure to chemical stressors is difficult to quantify, but then the following sentence states that the SLERA for the "site quantitatively assesses exposure to direct contact with contaminated soil only." This appears contradictory.

2) Section 2.4, pg. 14 Identification of Potential Receptors and Endpoints and Tables 1-3
The final sentence of this section states that a LOAEL (Lowest-Observed-Adverse-Effects-Level) was used a surrogate measurement endpoint for comparison purposes if a NOAEL (No-Observed-Adverse-Effects-Level) screening benchmark was not available. First, the Chemicals of Potential Ecological Concern (COPECs) for which this was done should have been noted in Tables 1-3. In addition, for a SERA, it is preferable to apply an uncertainty factor (typically, 0.1 to go from a LOAEL to a NOAEL) rather than use the less conservative LOAEL as a surrogate value for the more conservative NOAEL. This uncertainty factor should be applied and then noted in the table and discussed in the uncertainty section.

3) Section 4.0, pg 21 Uncertainty Analysis
The paragraph starting "Extensive scientific data..." references a presentation at a workshop (Nakles et al. 2002). It is not acceptable to reference an unpublished source such as this. There

are issues of reliability, accuracy, and context that can cast doubt over the information presented. Published information found from a literature search is warranted to support the concept of reduced bioavailability of contaminants in soil.

4) Section 5.0, pg 22 Conclusions and Recommendations
The first sentence is technically incorrect. The maximum detected concentrations of contaminants were not necessarily compared to the lowest established ecological benchmarks. The benchmarks were chosen via the hierarchies presented earlier in the document. This sentence should be corrected to reflect the actual process.

I may be contacted at 6-1526 if you have questions or comments. Please fill out the attached evaluation form and return it to Tom Short, SR-6J. The information is used to assess and improve our services.

cc: Tom Short, Section Chief, RRS #1